



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/811,345

03/26/2004

Russell Bonaventura

LEAP:135US

1573

7590

12/14/2005

C. Paul Maliszewski, P.E.
Simpson & Simpson, PLLC
5555 Main Street
Williamsville, NY 14221-5406

EXAMINER

PRITCHETT, JOSHUA L

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/811,345

Applicant(s)

BONAVENTURA ET AL.

Examiner

Joshua L. Pritchett

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 and 36-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-34 and 36-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to Amendment filed November 2, 2005. Claims 1, 2, 15, 30 and 36 have been amended and claim 35 has been cancelled as requested by the applicant.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The originally filed specification, drawings and claims fail to show an illumination source fully enclosed by a heat sink assembly. The examiner will examine the claim limitation as if the illumination source were “substantially fully enclosed” by the heat sink assembly as shown in Figs. 10 and 11 of the current application.

Claim Rejections - 35 USC § 103

Art Unit: 2872

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin (US 5,295,052).

Regarding claim 1, Chin teaches an illumination source (34); a heat sink assembly (80) including a lens (col. 1 lines 40-50) secured to the heat sink assembly and the heat sink assembly fully enclosing the illumination source (Fig. 5) and a plurality of fins (Fig. 5) formed at the heat sink assembly and operatively arranged to conduct heat away from the illumination source and to transfer the heat to air passing by or over the assembly (col. 2 lines 55-60). The illumination source in Chin is fully enclosed in a manner similar to that shown in Figs. 10 and 11 of the current application. Chin lacks specific reference to a microscope. Chin does state that the device is used for medical/surgical applications (abstract). It is extremely well known in the art to use microscopes in combination with light sources for medical/surgical applications. Official Notice is taken. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Chin light source used in combination with a microscope as suggested by Chin for the purpose of allowing surgery to be performed on parts of the body too small to be easily observed with the naked eye.

Regarding claim 2, Chin teaches the heat sink further comprises an inner wall (top of 36) and an outer wall (bottom of 36) separated by an air gap (Fig. 5).

Regarding claim 3, Chin teaches a first fin from the plurality of fins is connected to the outer wall and a second fin from the plurality of fins is connected to the inner wall (Fig. 5).

Claims 4-12, 14-24, 26-34, 36-43 and 46-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin (US 5,295,052) in view of Messinger (US 5,076,660).

Regarding claim 4, Chin teaches the invention as claimed including an air inlet (112) but lacks reference to a baffle directing the airflow. Messinger teaches the heat sink assembly (abstract) comprising a baffle (15, 19 and partitions shown in Fig. 1) located proximate the air inlet (Fig. 1) and operative arranged to deflect air entering via the inlet and to occlude the emanation of light from the source through the air inlet (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Chin invention include the baffles of Messinger for the purpose of greater cooling efficiency of the heat sink assembly.

Regarding claims 5, 6, 17, 18, 36 and 37, Chin teaches the invention as claimed including slots to formed in a base plate to allow rapid removal and replacement of components of the device (col. 3 lines 13-20). Chin lacks reference to the use of baffles to direct airflow through the heat sink assembly located in those slots. Messinger teaches the baffle plate overlies the air inlet (Fig. 1). Messinger further teaches a first plurality of baffles (Fig. 1). It would be obvious to one of ordinary skill in the art at the time the invention was made to use the slot teaching of Chin to mount the plurality of baffles taught by Messinger for the purpose of using the baffles to

direct air across the heat sink for efficient cooling and allow the baffles to be removed to clean off any debris brought into the device by the air inlet.

Regarding claims 7-12, 14, 19-24, 29, 38-43 and 46, Chin teaches the invention as claimed but lacks reference to the use of baffles to direct the airflow. Messinger teaches a baffle having an arcuate shape (15). The element, 15, acts as a baffle directing airflow into the coupling fixture. It would be obvious to have the other baffles (19 and partitions) have the same shape as 15 for the purpose of better directing the airflow. Messinger further teaches each of the baffles forms an opening between an edge of each baffle and the baffle plate disposed in a first direction (Fig. 1). Messinger further teaches the division of the first plurality baffles into two other pluralities of baffles. The second plurality of baffles (15 and 19) has an opening in the first direction and is parallel to the air inlet (9) (Fig. 1). The third plurality of baffles (partitions) has an opening in a second direction opposite the first direction and is perpendicular to the air inlet (9) (Fig. 1). Messinger further teaches an air outlet (13) wherein the heat sink assembly is operatively arranged to induce airflow into the air inlet, across the heat sink, and through the air outlet (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Chin invention include the baffles of Messinger for the purpose of greater cooling efficiency of the heat sink assembly.

Regarding claims 15, 16, 26, 30 and 47-50, Chin teaches an illumination source (34); a heat sink assembly (80) surrounding the illumination source (Fig. 5) and a plurality of fins (Fig. 5) formed at the heat sink assembly and operatively arranged to conduct heat away from the illumination source and to transfer the heat to air passing by or over the assembly (col. 2 lines 55-60). Chin lacks specific reference to a microscope. Chin does state that the device is used for

Art Unit: 2872

medical/surgical applications (abstract). It is extremely well known in the art to use microscopes in combination with light sources for medical/surgical applications. Official Notice is taken. Chin further lacks reference to the use of baffles. Messinger teaches the heat sink assembly (abstract) comprising a fixed baffle (19 and partitions shown in Fig. 1) located proximate the air inlet (Fig. 1) and operative arranged to deflect air entering via the inlet and to occlude the emanation of light from the source through the air inlet (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Chin invention include the baffles of Messinger for the purpose of greater cooling efficiency of the heat sink assembly. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Chin light source used in combination with a microscope as suggested by Chin for the purpose of allowing surgery to be performed on parts of the body too small to be easily observed with the naked eye.

Regarding claims 27, 31 and 33, Chin teaches the heat sink further comprises an inner wall (top of 36) and an outer wall (bottom of 36) separated by an air gap (Fig. 5).

Regarding claims 28, 32 and 34, Chin teaches a first fin from the plurality of fins is connected to the outer wall and a second fin from the plurality of fins is connected to the inner wall (Fig. 5).

Claims 13, 25, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chin (US 5,295,052) in view of Messinger (US 5,076,660) as applied to claims 5, 17 and 36 above, and further in view of Rauen (US 6,698,200).

Chin in combination with Messinger teaches the invention as claimed including a baseplate (14) with the air inlet disposed in the base plate (Fig. 2) but lacks reference to a thermal insulation layer. Rauen teaches the use of a thermal insulation layer between the baffles plate (60) and the base plate (Fig. 3). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the thermal insulation layer of Rauen in the Chin/Messinger invention for the purpose of preventing the heat created by the light source from adversely impacting other components of the microscope outside the heat sink assembly.

Response to Arguments

Applicant's arguments filed November 2, 2005 have been fully considered but they are not persuasive.

Applicant argues that the Chin reference fails to teach or suggest the illumination source fully enclosed by the heat sink assembly. There is no support for this claim limitation in the application as originally filed. Chin does teach the claim limitation to the extent that "fully enclosed" is shown in the drawings of the current application as stated above.

Applicant argues that Messinger fails to teach a fixed baffle and a baffle to occlude light from exiting the air inlet. Applicant's arguments seem to be drawn to viewing passages (11) as the only air inlet. As previously stated in the rejection the air inlet is element 9. Both the baffles, 19 and partitions, are fixed and the partition baffles occlude light from exiting air inlet 9. The partitions the examiner references to in the rejection are shown in Fig. 1 on the right hand side with arrows to indicate air flow passing between the partitions.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLP *JP*



DREW A. DUNN
SUPERVISORY PATENT EXAMINER